

(19)



JAPANESE PATENT OFFICE

## PATENT ABSTRACTS OF JAPAN

(11) Publication number: **10291320 A**(43) Date of publication of application: **04.11.98**

(51) Int. Cl.

**B41J 2/135****B23K 26/00****B23K 26/00****B41J 2/05**(21) Application number: **10123832**(22) Date of filing: **30.03.98**(30) Priority: **28.03.97 US 97 827241**(71) Applicant: **LEXMARK INTERNATL INC**(72) Inventor: **MURTHY ASHOK  
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POWERS JAMES HAROLD**(54) **NOZZLE PLATE HAVING IMPROVED FLUID  
CONSTITUTION OF INK JET PRINTER**

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(57) Abstract:

**PROBLEM TO BE SOLVED:** To improve an ink filtration characteristic of catching fragments, etc., by effecting resorption to an ink flow channel, a projection chamber, a nozzle hole, etc., by a laser inside a polymer film through a protecting film, and defining a flow feature of a nozzle plate.

**SOLUTION:** A polymeric film 100 coated with a protecting film is positioned on a platen. A laser 114 projects light into the polymeric film 100, thereby carrying out resorption or ablation to a flow feature and forming a plurality of nozzle plates in the film. A laser beam 116 is orientated so as to pass a mask 118, and consequently collided to the polymeric film 100. As a result, a plurality of parts of the polymeric material are removed in a required pattern from the film, and consequently the flow feature of the nozzle plate is formed. Some of the substance removed from the polymeric film 100 forms decomposed product or fragments and is piled again on the protecting film on the polymeric film 100.

